

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

LISTING OF CLAIMS

1-5. Canceled

6. (Previously Presented) An image sensing device comprising:

a first optical system for forming a first object image;

a first area sensor arranged in the approximate image forming plane of the first optical system for receiving the light of the first object image, wherein sensing elements of the first area sensor are arranged contiguously in two dimensions;

a second optical system for forming a second object image;

a second area sensor arranged in the approximate image forming plane of the second optical system for receiving the light of the second object image, wherein sensing elements of the second area sensor are arranged contiguously in two dimensions;

a signal reader for reading a first photoreception signal group from said first area sensor, a second photoreception signal group from said second area sensor and a third photoreception signal group from said second area sensor, wherein the first photoreception signal group constitutes a set of two-dimensional image data from the first object image, the second photoreception signal group constitutes a first set of two-dimensional image data from the second object image, and the third

photoreception signal group constitutes a second set of two-dimensional image data from the second object image;

a position detector for detecting a first image interval by comparing the two-dimensional image data of the second photoreception signal group with the two-dimensional image data of the first photoreception signal group, and for detecting a second image interval by comparing the two-dimensional image data of the third photoreception signal group with the two-dimensional image data of the first photoreception signal group; and

an angle detector for detecting a magnitude of an angle of the second object image relative to an axis of the second area sensor based on the detected image intervals.

7. (Previously Presented) An image sensing device according to claim 6, wherein said angle detector detects the angle of the second object image relative to the axis of the second area sensor by means of data of relative positional relationship of said optical systems and said area sensors.

8. (Previously Presented) An image sensing device according to claim 6, wherein at least part of the second and the third photoreception signal groups include photoreception signals from a same part of the second area sensor.

9. (Previously Presented) A distance measuring device comprising:
a first optical system for forming a first object image;

a first area sensor arranged in the approximate image forming plane of the first optical system for receiving the light of the first object image, wherein sensing elements of the first area sensor are arranged contiguously in two dimensions;

a second optical system for forming a second object image;

a second area sensor arranged in the approximate image forming plane of the second optical system for receiving the light of the second object image, wherein sensing elements of the second area sensor are arranged contiguously in two dimensions;

a signal reader for reading a first photoreception signal group from said first area sensor, a second photoreception signal group from said second area sensor and a third photoreception signal group from said second area sensor, wherein the first photoreception signal group constitutes a set of two-dimensional image data from the first object image, the second photoreception signal group constitutes a first set of two-dimensional image data from the second object image, and the third photoreception signal group constitutes a second set of two-dimensional image data from the second object image;

a position detector for detecting a first image interval by comparing the two-dimensional image data of the second photoreception signal group with the two-dimensional image data of the first photoreception signal group, and for detecting a second image interval by comparing the two-dimensional image data of the third photoreception signal group with the two-dimensional image data of the first photoreception signal group;

an angle detector for detecting a magnitude of an angle of the second object image relative to an axis of the second area sensor based on the detected image intervals; and

a distance detector for calculating an object distance based on a distance between analogous object images formed on the first and the second area sensors.

10. (Previously Presented) A distance measuring device according to claim 9, wherein said distance detector includes a distance corrector for correcting the distance between the first and second object images formed on the first and the second area sensors to a corrected distance and that calculates the object distance using the corrected distance.

11-20. Canceled

21. (Previously Presented) An image sensing device according to claim 6, wherein:

the sensing elements of each of the first and second area sensors are disposed two-dimensionally at a pitch p in each of two dimensions;

the second photoreception signal group is read from a first two-dimensional portion of the second area sensor; and

the third photoreception signal group is read from a second two-dimensional portion of the second area sensor.

22. (Previously Presented) An image sensing device according to claim 21, wherein the first and second two-dimensional portions of the second area sensor partially overlap.

23. (Previously Presented) An image sensing device according to claim 6, wherein the position detector detects the first image interval by calculating a difference between the second photoreception signal group and the first photoreception signal group, and detects the second image interval by calculating a difference between the third photoreception signal group and the first photoreception signal group.

24. (Previously Presented) An image sensing device according to claim 9, wherein:

the sensing elements of each of the first and second area sensors are disposed two-dimensionally at a pitch p in each of two dimensions;

the second photoreception signal group is read from a first two-dimensional portion of the second area sensor; and

the third photoreception signal group is read from a second two-dimensional portion of the second area sensor.

25. (Previously Presented) An image sensing device according to claim 24, wherein the first and second two-dimensional portions of the second area sensor partially overlap.

26. (Previously Presented) An image sensing device according to claim 9, wherein the position detector detects the first image interval by calculating a difference between the second photoreception signal group and the first photoreception signal group, and detects the second image interval by calculating a difference between the third photoreception signal group and the first photoreception signal group.

27-30. Canceled